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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,406	01/26/2001	Abbas Bagasrawala	1	6323

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EXAMINER
SWEARINGEN, JEFFREY R

ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/771,406	BAGASRAWALA, ABBAS
	Examiner	Art Unit	
	Jeffrey R. Swearingen	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2005*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 August 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   The finality of the previous Office Action has been withdrawn. Applicant's arguments within the

Appeal Brief were considered, but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the

enablement requirement. The claim(s) contains subject matter which was not described in the

specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most

nearly connected, to make and/or use the invention. Applicant is comparing a value of a quantity of traffic

that has been processed with a value of a quantity of traffic that has not been processed. Applicant has

failed to explain how a value of a quantity of traffic can be calculated if said traffic has not been

processed. The ambiguity on where the calculation is performed, how the calculation is performed, and

the definition of processing the traffic by the network element prevents one of ordinary skill in the art from

enabling the invention based on this abnormality in the logical flow of operation of the invention as

claimed by Applicant.

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   Claims 1, 2, 8, 9, 10, 14, 16, 18, and 19 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

6.   The terms "time period" and "periodic" in claims 1, 2, 8, 9, 10, 16, 18, and 19 are relative terms

which renders the claims indefinite. These time identifiers are not defined by the claims, the specification

does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art

would not be reasonably apprised of the scope of the invention.

7.   Claim 14 is rejected because it refers to the method of claim 1. Claim 1 is an apparatus claim,

and there is insufficient antecedent basis for the method claim in claim 14. The Examiner treats this as

being dependent upon the method of claim 9 for purposes of compact prosecution.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for

the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed
> publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9.   Claims 1-2, 6-7, 9-10, 14-15, and 17 are rejected under 35 U.S.C. 102(a) as being anticipated by

Vaid et al. (U.S. Patent No. 6,137,777).

10.   In regard to claim 1, Vaid disclosed *a digital processor operable on a periodic basis to calculate a*

weighted traffic flow per usage for a given network element, said digital processor further including, a

comparison mechanism for comparing a value of said weighted traffic flow per usage with a remainder

value of said specific quantity of communications traffic yet to be processed by said network element,

wherein an indication is given by said network element if said remainder value is less than said weighted

traffic flow. Vaid performed incoming and outgoing management of information over a computer network.

The flows were controlled by time and other values. [column 9, lines 20-29] Time periods for monitoring

the importance of traffic [*value of said weighted traffic flow per usage*] were used to detect problems and

compare bandwidth usage over a particular segment of the network by a particular group of users based

upon frequency of usage. [column 9, line 57 – column 10, line 41]

11.   In regard to claim 2, Vaid is applied as in claim 1. Vaid further disclosed *said digital processor*

waits until beginning another time period to calculate another value of said weighted traffic flow per usage

to be compared with an updated remainder value. In column 9, line 57 – column 10, line 41, Vaid

disclosed comparing values of traffic based upon frequency of usage over various periods of time.

12.   In regard to claim 6, Vaid is applied as in claim 1. Vaid further disclosed *said apparatus is used in connection with a communications traffic monitoring application to identify randomly occurring traffic patterns*. Vaid detected traffic bursts [column 10, lines 1-5] which is a *randomly occurring traffic pattern*.

13.   In regard to claim 7, Vaid is applied as in claim 1. Vaid further disclosed *said apparatus is used in connection with a communications network management application to monitor usage of network components*. Column 8, line 66 – column 9, line 56 disclosed network management using the control of traffic flows and monitoring network performance.

14.   In regard to claim 9, Vaid disclosed *calculating on a periodic basis a weighted traffic flow per usage for a given network element;* [column 9, line 57 – column 10, line 41] *comparing a value of said weighted traffic flow per usage with a remainder value of said specific quantity of communications traffic yet to be processed by said network element;* [column 9, line 62-66; column 10, lines 16-23] *and giving an indication from said network element if said remainder value is less than said weighted traffic flow.* Network flows were monitored and alarms and reports were produced. [column 9, lines 20-29]

15.   In regard to claim 10, Vaid is applied as in claim 9. Vaid further disclosed *waiting until beginning another time period to calculate another value of said weighted traffic flow per usage to be compared with an updated remainder value.* In column 9, line 57 – column 10, line 41, Vaid disclosed comparing values of traffic based upon frequency of usage over various periods of time.

16.   In regard to claim 14, Vaid is applied as in claim 9. Vaid further disclosed *said method is used in connection with a communications traffic monitoring application to identify randomly occurring traffic patterns*. Vaid detected traffic bursts [column 10, lines 1-5] which is a *randomly occurring traffic pattern*.

17.   In regard to claim 15, Vaid is applied as in claim 9. Vaid further disclosed *said method is used in connection with a communications network management application to monitor usage of network components*. Column 8, line 66 – column 9, line 56 disclosed network management using the control of traffic flows and monitoring network performance.

18.   In regard to claim 17, Vaid is applied as in claim 9. Vaid further disclosed *at least a portion of said communications traffic flows between network elements over the public Internet.* [column 6, lines 21-38; figure 1]

Claim Rejections - 35 USC § 103

19.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

20.   Claims 3-5, 11-13, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Vaid in view of Kent et al. (RFC 2401: Security Architecture for the Internet Protocol, November 1998).

21.   In regard to claim 3, Vaid is applied as in claim 1. Vaid failed to disclose the association of a

quantity of traffic with a security association between network elements. Vaid did disclose monitoring the

traffic between network elements. Vaid disclosed in column 2, lines 39-46 that a preferred embodiment of

the invention involved security management with a firewall. RFC 2401 in section 2.2 disclosed that IPSec

was a part of an overall system security architecture. IPSec provided "limited traffic flow confidentiality"

(3.1). A Security Association was a fundamental concept to IPSec. (4, 4.1). A security association

provided a Security Policy Database which specified certain "minimum management functionality". (4.4.1)

Since IPSec was a part of an overall security architecture, and provided a database which specified

"minimum management functionality" (*quantity value*) and Vaid provided traffic management for a security

device such as a firewall, it would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the teachings of RFC 2401 with the Vaid invention to allow for increased security by

the use of IPSec with a traffic management system.

22.   In regard to claim 4, Vaid in view of Kent is applied as in claim 3. Kent further disclosed *said*

indication given from said network elements prompts renegotiation of another SA. In section 4.4.3, Kent

disclosed the refreshing of an expired SA based upon a "warning" to initiate action such as setting up a

replacement SA. (page 22 of RFC; page 20 of printout)

23.   In regard to claim 5, Vaid in view of Kent is applied as in claim 3. As shown previously in the
rejection of claim 3, the combination of Vaid in view of Kent utilized a security association based upon the
IPsec standard.

24.   In regard to claim 11, Vaid is applied as in claim 9. Vaid failed to disclose the association of a
quantity of traffic with a security association between network elements. Vaid did disclose monitoring the
traffic between network elements. Vaid disclosed in column 2, lines 39-46 that a preferred embodiment of
the invention involved security management with a firewall. RFC 2401 in section 2.2 disclosed that IPSec
was a part of an overall system security architecture. IPSec provided "limited traffic flow confidentiality"
(3.1). A Security Association was a fundamental concept to IPSec. (4, 4.1). A security association
provided a Security Policy Database which specified certain "minimum management functionality". (4.4.1)
Since IPSec was a part of an overall security architecture, and provided a database which specified
"minimum management functionality" (*quantity value*) and Vaid provided traffic management for a security
device such as a firewall, it would have been obvious to one of ordinary skill in the art at the time of the
invention to combine the teachings of RFC 2401 with the Vaid invention to allow for increased security by
the use of IPSec with a traffic management system.

25.   In regard to claim 12, Vaid in view of Kent is applied as in claim 11. Kent further disclosed *said
indication given from said network elements prompts renegotiation of another SA*. In section 4.4.3, Kent
disclosed the refreshing of an expired SA based upon a "warning" to initiate action such as setting up a
replacement SA. (page 22 of RFC; page 20 of printout)

26.   In regard to claim 13, Vaid in view of Kent is applied as in claim 11. As shown previously in the
rejection of claim 11, the combination of Vaid in view of Kent utilized a security association based upon
the IPSec standard.

27.   In regard to claim 18, Vaid disclosed performed incoming and outgoing management of
information over a computer network. The flows were controlled by time and other values. [column 9,
lines 20-29] Time periods for monitoring the importance of traffic [*value of said weighted traffic flow per
usage*] were used to detect problems and compare bandwidth usage over a particular segment of the
network by a particular group of users based upon frequency of usage. [column 9, line 57 – column 10,

line 41] Vaid failed to disclose the association of a quantity of traffic with a security association between network elements. Vaid did disclose monitoring the traffic between network elements. Vaid disclosed in column 2, lines 39-46 that a preferred embodiment of the invention involved security management with a firewall. RFC 2401 in section 2.2 disclosed that IPSec was a part of an overall system security architecture. IPSec provided "limited traffic flow confidentiality" (3.1). A Security Association was a fundamental concept to IPSec. (4, 4.1). A security association provided a Security Policy Database which specified certain "minimum management functionality". (4.4.1) Kent further disclosed *said indication given from said network elements prompts renegotiation of another SA.* In section 4.4.3, Kent disclosed the refreshing of an expired SA based upon a "warning" to initiate action such as setting up a replacement SA. (page 22 of RFC; page 20 of printout) Since IPSec was a part of an overall security architecture, and provided a database which specified "minimum management functionality" (*quantity value*) and Vaid provided traffic management for a security device such as a firewall, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of RFC 2401 with the Vaid invention to allow for increased security by the use of IPSec with a traffic management system.

28.   In regard to claim 20, Vaid in view of Kent is applied as in claim 18. As shown previously in the rejection of claim 18, the combination of Vaid in view of Kent utilized a security association based upon the IPSec standard.

Allowable Subject Matter

29.   Claims 8, 16, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

30.   The following is a statement of reasons for the indication of allowable subject matter: The equation listed by applicant involving the multiplication of the average use of a network element per period multiplied by the average communications traffic quantity per use is distinguished over the prior art.

Conclusion

31.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Farrell et al.   U.S. Patent No. 6,751,663

Jorgensen   U.S. Patent No. 6,452,915

Bullard et al.   U.S. Patent No. 6,405,251

Kunz, Thomas et al. "Fast Detection of Communication Patterns in Distributed Executions." IBM Press. Proceedings of the 1997 conference of the Centre for Advanced Studies on Collaborative Research. Toronto, Ontario. 1997.

Feustel, Edward et al. "The DGSA: Unmet Information Security Challenges for Operating System Designers." ACM Press. ACM SIGOPS Operating Systems Review. Vol. 32, Issue 1. New York, NY. 1998. pp. 3-22.

Ioannidis, Sotiris et al. "Implementing a Distributed Firewall." ACM Press. Proceedings of the 7th ACM Conference on Computer and Communications Security. Athens, Greece. 2000. pp. 190-199.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571) 272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

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at 866-217-9197 (toll-free).

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